REMARKS

In paragraph 1 of the Action, the drawings were objected to. In view of the objection, the drawings have been amended to add -- Prior Art -- in Fig. 2.

In paragraph 2 of the Action, it was required to amend the abstract of the disclosure not to exceed 150 words. In view of the request, the abstract of the disclosure has been amended.

In paragraph 3 of the Action, the specification was objected to because of the informalities. In view of the objection, the specification has been amended to correct the informalities.

In paragraph 5 of the Action, claims 1-8 were rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2000/268796 in view of JP 09-199100. In view of the rejections, claim 1 has been amended to add limitations and clarify the features of the invention, and new claim 9 has been filed.

As recited in amended claim 1, a separator for a valve regulated lead acid battery comprises fine glass fibers comprising acid resistant glass fibers and contained in a range of 50 to 92% by weight, inorganic powder, beaten natural pulp, and heat-weldable organic fibers for welding the fine glass fibers, the inorganic powder and the beaten natural pulp together. In the invention, the heat-weldable organic fibers have a fineness of 1.5d (deniers) or less and a fiber length of 1 mm or more, and the amount of the heat-weldable organic fibers is from 3% to 15% by weight. Further, the separator is used in a bent shape and has folding endurance of 6.8 N/10 mm^2 or greater at a second folding.

In the invention, since the separator has acid resistance, the fine glass fibers have resistance against sulfuric acid electrolyte, so that the separator is suitable for a valve regulated lead acid battery. Further, since the fine glass fibers are welded together with the inorganic powder and the beaten natural pulp by the heat-weldable organic fibers, when the separator is used in a bent shape, the separator has folding endurance of 6.8 N/10 mm^2 or greater at a second folding.

JP '796 discloses a separator for a sealed lead acid battery. The separator is mainly formed of fine glass fibers, and contains 3

Amendments to the Drawings

In Fig. 2, add -- Prior Art --, as shown in red in the attached drawing.

to 20% of natural pulp and 5 to 30% of inorganic fine particles. The separator has an areal density of 0.165 g/cm^2 or greater. The fine glass fiber is an acid resistant glass fiber having an average diameter of 1 μm or less.

In the invention, the fine glass fibers are welded together with the inorganic powder and the beaten natural pulp by the heat-weldable organic fibers. The separator is bendable, and has folding endurance of 6.8 N/10 mm^2 or greater at the second folding. However, JP '796 does not disclose or suggest the heat-weldable organic fibers of the invention. Also, JP '796 is silent to folding endurance. As explained in the specification of the invention, it is difficult to obtain high folding endurance without the heat-weldable organic fibers. Therefore, JP '796 does not disclose or suggest the features of the invention.

JP '100 discloses a separator for an alkaline battery. The separator is formed of polyolefin type synthetic pulp containing 1.0 to 10.0 weight% of polyvinyl-alcohol. After treated at a temperature above a melting point thereof or 100°C, the synthetic pulp is mixed with polyolefin type heat-weldable fiber winder, and the mixture is formed in a sheet. The sheet is thermally welded at a temperature higher than a melting point of the fiber binder and lower than the melting point of the synthetic pulp to obtain the separator.

In the invention, the separator contains the fine glass fibers having acid resistance. Accordingly, the fine glass fibers have resistance against sulfuric acid electrolyte, so that the separator is suitable for a valve regulated lead acid battery. Further, the fine glass fibers are welded together with the inorganic powder and the beaten natural pulp by the heat-weldable organic fibers. The separator is bendable, and has folding endurance of 6.8 N/10 mm^2 or greater at the second folding. In JP '100, there is no disclosure or suggestion regarding the heat-weldable organic fibers which enhances the folding endurance of the fine glass fibers. Also, JP '100 is silent to folding endurance. As explained in the specification of the invention, it is difficult to obtain high folding endurance without the specific combination of the materials

of the invention. Therefore, JP '100 does not disclose or suggest the features of the invention.

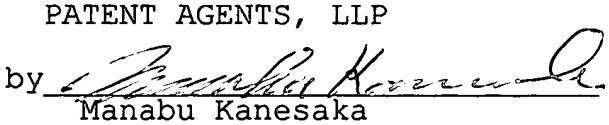
As explained above, the cited references do not disclose or suggest the features of the invention. Even if the cited references are combined, the invention is not obvious from the cited references.

Reconsideration and allowance are earnestly solicited.

One month extension of time is hereby requested. A credit card authorization form in the amount of $120.00 is attached herewith for the one month extension of time.

Respectfully submitted,

HAUPTMAN KANESAKA BERNER
PATENT AGENTS, LLP

by 
Manabu Kanesaka
Reg. No. 31,467
Agent for Applicants

1700 Diagonal Road, Suite 310
Alexandria, VA 22314
(703) 519-9785